

REMARKS

Claims 1 and 3 through 8 are pending in this Application, of which claim 8 stands withdrawn from consideration pursuant to the provisions of 37 C.F.R. §1.142(b).¹ Figs. 3 and 4 have been amended by providing the legend "PRIOR ART" and the specification amended consistent with the Examiner's request. In addition, the limitations of claim 2 have been incorporated into claim 1, and claim 2 cancelled. Applicants submit that the present Amendment does not generate any new matter issue.

Drawings

The Examiner asserted that Fig. 3 should be designated by an appropriate legend such as "PRIOR ART". In response, as indicated on the replacement sheet (Exhibit A hereto), Figs. 3 and 4 have been amended by providing the legend "PRIOR ART" as requested by the Examiner.

Specification

The Examiner objected to the disclosure asserting that the sentence bridging pages 10 and 11 of the written description of the specification is confusing. Applicants disagree.

Specifically, a comparative example is presented as "Example 1" at page 10 commencing at line 6. In that example a comparison of the present invention with half cutting using laser beams is presented. The plate cut had a thickness of 0.635 mm. The sentence bridging pages 10 and 11 specifies that in the case of half cutting, laser beam irradiation time was controlled such

¹ Applicants note a regrettable clerical oversight in that the claims appended to the Appeal Brief of February 26, 2003 were not accurate. It is believed that the Amendments to the Claims submitted with this Amendment is accurate.

that the laser beams penetrated to a depth of 200 to 250 μm which is approximately the half way point in thickness.

Any confusion is regrettable. At any rate, in order to comply with the Examiner's request, the sentence bridging pages 10 and 11 has been amended for clarity.

Based upon the foregoing, Applicants solicit withdrawal of the objection to the specification.

Claims 1 through 3, 5 and 6 were rejected under 35 U.S.C. §102 for lack of novelty as evidenced by the acknowledged prior art.

This rejection is traversed, basically because Applicants did **not**, repeat **not**, admit in any way that claims 1 through 3, 5 and 6 lack novelty.

The factual determination of lack of novelty under 35 U.S.C. §102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Dayco Prods., Inc. v. Total Containment, Inc.* 329 F.3d 1358 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002). In imposing a rejection under 35 U.S.C. §102, the Examiner is required to specifically identify wherein an applied reference is perceived to identically disclose each feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). That burden has not been discharged. Indeed, there are significant differences between the claimed invention and the acknowledged prior art that scotch the factual

determination that the acknowledged prior art comprises a method identically corresponding to that claimed.

Specifically, it is **not** apparent and the Examiner has **not** identified wherein the acknowledged prior art comprises the manipulative step of forming a **flaw** to begin with. **Cutting halfway through is not forming a flaw.** The Examiner may say that “half cutting” is equivalent to a flaw, but that is not what the acknowledged prior art discloses. In fact, forming a flaw is distinguished from “half cutting” in the first paragraph on page 7 of the written description of the specification. Thus, it is clear that Applicants have **not** admitted that conventional practices comprise forming a flaw, let alone a continuous flaw, on at least one surface of a ceramics sintered base plate prior to dividing the ceramics sintered base plate. The Examiner is **not**, repeat **not**, free to arm twist an admission out of Applicants where Applicants did not intend any admission. *Reading & Bates Construction Co., v. Baker Energy Resources Corp.*, 748 F.2d 648 223 USPQ1168 (Fed. Cir. 1984). The Examiner’s attempt to coerce an admission out of Applicants constitutes a violation of procedural due process of law.

Applicants would note that the use of a cemented carbide or diamond tool edge to form a flaw is functionally significant as revealed at page 6 of the written description of the specification, lines 17 through 24.

The above argued functionally significant difference between the manipulative steps of the claimed method and the acknowledged prior art undermines the factual determination that the acknowledged prior art constitutes a description of a method identically corresponding to that claimed. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicants, therefore, submit that the imposed rejection of

claims 1 through 3, 5 and 6 under 35 U.S.C. §102 for lack of novelty as evidenced by the acknowledged prior art is not factually viable and, hence, solicit withdrawal thereof.

Claims 1 and 7 were rejected under 35 U.S.C. §102 for lack of novelty as evidenced by Cotton.

This rejection is traversed. Indeed, this rejection has been rendered moot by incorporating the limitations of claim 2 into claim 1, claim 2 not being subject to this rejection. As apparently recognized by the Examiner, Cotton neither discloses nor suggests a method which comprises forming a flaw, as one having ordinary skill in the art would have understood in the **context of the present invention**, using a flawing tool with a cemented carbide or diamond blade edge. This difference in manipulative steps between the claimed method and Cotton's method undermines the factual determination that Cotton discloses a method identically corresponding to that claimed. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc., supra; Kloster Speedsteel AB v. Crucible Inc., supra.*

Applicants, therefore, submit that the imposed rejection of claims 1 and 7 under 35 U.S.C. §102 for lack of novelty as evidenced by Cotton is not factually viable and, hence, solicit withdrawal thereof.

Claims 5 and 6 were rejected under 35 U.S.C. §103 for obviousness predicated upon Cotton in view of the acknowledged prior art.

This rejection is traversed. Specifically, claims 5 and 6 depend from independent claim 1. Applicants incorporate herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. §102 for lack of novelty as evidenced by Cotton. The

acknowledged prior art does not cure the argued deficiencies of Cotton. The acknowledged prior art does **not**, repeat **not**, constitute an admission of a conventional method which comprises forming a continuous flaw, as one having ordinary skill in the art would have understood the term “flaw” in the context the claimed invention. *Elkay Manufacturing Co., v. Ebco Manufacturing Co.*, __ F3d __, 52 USPQ 2d 1109 (Fed. Cir. 1999); *See also, In re Cortright*, 165 F.3d 1353, 49 USPQ2d 1464 (Fed. Cir. 1999). Indeed, the specification upon which the Examiner relies clearly distinguishes forming a “flaw” from “half cutting”. Page 7 of the written description of the specification, first paragraph.

Accordingly, even if the applied references are combined, the claimed invention would **not** result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

Applicants, therefore, submit that the imposed rejection of claims 5 and 6 under 35 U.S.C. §103 for obviousness predicated upon Cotton in view of the acknowledged prior art is not factually or legally viable and, hence, solicit withdrawal thereof.

Claims 1 and 4 through 7 were rejected under 35 U.S.C. §103 for obviousness predicated upon Ishii in view of the acknowledged prior art.

In the statement of the rejection the Examiner asserted that Ishii discloses a method of dividing a sintered base plate along a flaw by applying an external force. The Examiner admitted that Ishii et al. does not disclose that the base plate is a ceramic sintered base plate comprising aluminum nitride. The Examiner, however, stated that the acknowledged prior art teaches flawing and dividing an aluminum nitride sintered base plate. The Examiner then concluded that one having ordinary skill in the art would have been motivated to apply Ishii’s

technique to the acknowledged prior art. The Examiner then concluded that one having ordinary skill in the art would have been motivated to select an appropriate depth of the flaw. This rejection is traversed as factually and legally erroneous.

Firstly, this rejection has been rendered moot by incorporating the limitations of claim 2, not subject to this rejection, into claim 1. As implicitly acknowledged by the Examiner, the applied references neither disclose nor suggest a method as defined in independent claim 1, which method comprises employing a flawing tool with a blade portion made of cement carbide or diamond. Moreover, Applicants submit that the Examiner did not establish the requisite factual basis or fact-based motivation to establish a *prima facie* basis to deny patentability to the claimed invention under 35 U.S.C. §103.

Insufficient Facts

It is not apparent and the Examiner does not specifically identify, as judicially required, wherein Ishii discloses or even suggests a method which involves dividing a ceramic **sintered base plate**. See, for example, *Smiths Industries Medical System v. Vital Signs Inc.*, 183 F.3d 1347, 51 USPQ2d 1415 (Fed. Cir. 1999), wherein the court held that in order to establish the requisite motivation the source of each claim limitation in the prior art must be identified as well as the source for the requisite motivation.

Ishii relates to a tile cutter. It is not apparent and the Examiner did not specifically identify wherein Ishii discloses or suggests a ceramic **sintered base plate**. The Examiner did not identify anything in the applied prior art which would support the conclusion that any articles contemplated by Ishii would **necessarily** include ceramic **sintered base plates**. To whatever extent the Examiner may tacitly be invoking the doctrine of inherency, Applicants would stress

that inherency requires **certainty, not speculation**. *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 34 USPQ2d 1565 (Fed. Cir. 1995); *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991). The Examiner did not factually establish that the tool disclosed by Ishii is even capable of scoring a ceramic sintered base plate. The absence of such supporting facts exacerbate the lack of certainty associated with the tacit implication of the doctrine of inherency.

There is no Motivation

In order to establish the requisite motivation, the Examiner must make a “thorough and searching” factual inquiry and, based upon that factual inquiry, explain **why** one having ordinary skill in the art would be realistically impelled to combine particular prior art, in this case to combine Ishii and the acknowledged prior art, to arrive at the claimed invention. *In re Lee*, 237 F.3d 1338, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). Such a factual inquiry requires **clear and particular factual findings** as to a specific understanding or specific technological principle which would have realistically impelled one having ordinary skill in the art to combine the applied references to arrive at the claimed invention. *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 57 USPQ2d 1161 (Fed. Cir. 2000); *Ecolchem Inc. v. Southern California Edison, Co.* 227 F.3d 1361, 56 USPQ2d 1065 (Fed. Cir. 2000); *In re Kotzab*, 217 F.3d 1365, 55 USPQ 1313 (Fed. Cir. 2000); *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). A **specific reason** must be offered based upon **facts** to support the asserted motivation--not generalizations.

Ecolochem Inc. v. Southern California Edison, Co. supra; In re Rouffet, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998).

Even more significantly, it has been repeatedly judicially held that both the **suggestion and the reasonable expectation of success** “must be founded in the prior art, not in the applicant’s disclosure.” *Velander v. Garner*, ____ F.3d ____, 68 USPQ2d 1769, 1772 (Fed. Cir. 2003); *In re Vaeck, 947 F.2d 488, 493 [20 USPQ2d 1438] (Fed. Cir. 1991) (citing In re Dow Chem. Co., 837 F.2d 469, 473 [5 USPQ2d 1529] (Fed. Cir. 1988)).*

In applying the above legal tenets to the exigencies of this case, Applicants submit that the requisite fact based motivation has not been established. Firstly, as previously pointed out, Ishii neither discloses nor suggests dividing a ceramic **sintered** base plate.

Secondly, the Examiner mischaracterized the acknowledged prior art. The acknowledged prior art does **not** contain any teaching of the conventionality of **flawing** and dividing a sintered base plate of any type. **Cutting half way through is not the same as forming a flaw, as one having ordinary skill in the art would have understood.** Indeed, on page 7 of the December 5, 2003 Office Action, the Examiner advances an interpretation of Ishii as only forming a flaw in the surface of the base plate. But the acknowledged prior art goes to half cutting – not forming a flaw. In the first paragraph on page 7 of the written description of the specification, forming a flaw is distinguished from “half cutting”. Accordingly, the attempted nexus between Ishii and the acknowledged prior art is improper.

Again, Ishii neither discloses nor suggests dividing a ceramics **sintered** base plate. The acknowledged prior art does **not** admit the conventionality of **flawing** a ceramics **sintered** base plate, let alone with a cutting tool having a diamond or cemented carbide blade edge. Hence, there is **no** apparent reason to combine Ishii with the acknowledged prior art apart from

Applicants' disclosure which, of course, is forbidden territory upon which the Examiner may excavate for the requisite motivational element. *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337 (Fed. Cir. 1985).

The Examiner's optimization theory is erroneous.

The Examiner's reliance upon the drawing of Ishii does not withstand scrutiny, because the drawings **are not drawn to scale**. This is judicially recognized. *Kloster Speedsteel AB v. Crucible Inc.*, *supra*; *Hockerson-Halberstadt, Inc. v. Ava Group International Inc.*, ____ F.3d ____, 55 USPQ2d 1487 (Fed. Cir. 2000).

Secondly, no where in Ishii nor in the acknowledged prior art is there any disclosure that the depth of a flaw is an **art-recognized** result effective variable. This being the case, it is legally erroneous for the Examiner to conclude that one having ordinary skill in the art would have selected the appropriate depth of the flaw, as in claim 4. The Examiner's attention is invited to *In re Rijckaert*, *supra*; *In re Yates*, 663 F.2d 1054, 211 USPQ 1149 (CCPA 1981); *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). **Accordingly, Applicants separately advocate the patentability of claim 4.**

Indicium of Nonobviousness

It should, therefore, be apparent that the Examiner did not establish a *prima facie* basis to deny patentability to the claimed invention for lack of the requisite factual basis and want of the requisite realistic motivation. Moreover, there is a potent indicium of **nonobviousness** which appears to have eluded the Examiner's attention.

It is well settled that the **problem** addressed and solved by a claimed invention must be given consideration in resolving the ultimate legal conclusion of obviousness under 35 U.S.C. §103. *North American Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 28 USPQ2d 1333 (Fed. Cir. 1993); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 15 USPQ2d 1321 (Fed. Cir. 1990); *In re Newell*, 891 F.2d 899, 13 USPQ2d 1248 (Fed. Cir. 1989); *In re Nomiya*, 509 F.2d 566, 184 USPQ 607 (CCPA 1975). The present invention addresses and solves problems attendant upon conventional practices used to divide ceramic **sintered** base plates, such as high processing costs, generation of flaws lowering the breaking strength, generation of defects, reduction in dimensional accuracy and generation of ammonia. These problems are conspicuous by the lack of any mention thereof by Ishii.

Moreover, there is evidence of record in the specification demonstrating the superiority of the claimed invention vis a vis conventional techniques for dividing ceramic sintered base plates, such as dicing, half cutting and laser beam cutting. *See*, for example, Table 3 at page 14 of the written description of the specification. Such evidence is entitled to consideration anent the nonobviousness issue. *In re Glaug*, ___ F.3d ___, 62 USPQ2d 1151 (Fed. Cir. 2002); *In re Soni*, 54 F.3d 746, 34 USPQ2d 1685 (Fed. Cir. 1995); *In re Margolis*, 785 F.2d 1029, 228 USPQ 940 (Fed. Cir. 1986).

Conclusion

Based upon the foregoing Appellants submit that the Examiner did not establish a *prima facie* basis to deny patentability to the claimed invention under 35 U.S.C. §103 for lack of the requisite factual basis and want of the requisite realistic motivation. Moreover, upon giving due consideration to the problem addressed and solved by the claimed invention, and the comparative

data in the written description of the specification, the conclusion appears inescapable that one having ordinary skill in the art would **not** have found the claimed invention as a **whole** obvious within the meaning of 35 U.S.C. §103. *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984).

Applicants, therefore, submit that the imposed rejection of the claims 1 and 4 through 7 under 35 U.S.C. §103 for obviousness predicated upon Ishii in view of the acknowledged prior art is not factually or legally viable and, hence, solicit withdrawal thereof.

Claims 2 and 3 were rejected under 35 U.S.C. §103 for obviousness predicated upon Ishii in view of the acknowledged prior art and Yasuga.

This rejection is traversed. Specifically, claims 2 and 3 depend from independent claim 1. Applicants incorporate herein the arguments previously advanced in traversing the rejection of claim 1 (the limitations of claim 2 having been incorporated into claim 1) under 35 U.S.C. §103 for obviousness predicated upon Ishii in view of the acknowledged prior art. The additional reference to Yasuga does not cure the argued deficiencies and the attempted combination of Ishii and the acknowledged prior art.

Applicants, therefore, submit that the imposed rejection of claims 2 and 3 under 35 U.S.C. §103 for obviousness predicated upon Ishii in view of the acknowledged prior art and Yasuga is not factually or legally viable and, hence, solicit withdrawal thereof.

Based upon the foregoing, it should be apparent that the imposed objection and rejections have been overcome and that all active claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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